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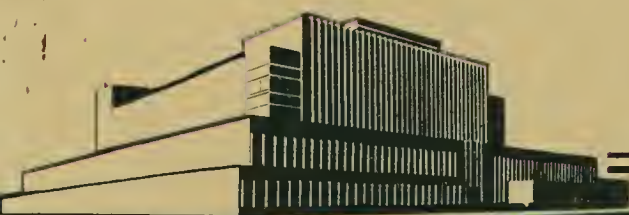
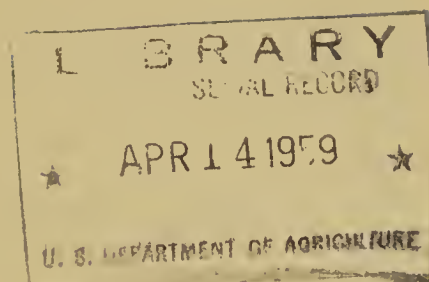
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Cp. 2
No. 444

List of Publications on

PULP AND PAPER

February 1959

No. 444



FOREST PRODUCTS LABORATORY
MADISON 5, WISCONSIN

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE

In Cooperation with the University of Wisconsin

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INSTRUCTIONS FOR OBTAINING PUBLICATIONS

Publications available for distribution at this Laboratory are marked with an asterisk (*).

Single technical notes, reprints, and processed reports may be obtained free upon request from the Director, Forest Products Laboratory, Madison 5, Wis.

Federal Government bulletins, circulars, and leaflets, if not available for free distribution at this Laboratory, may be purchased at the prices indicated from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Send money order, draft, or cash; stamps or personal checks are not accepted.

Trade journals containing articles herein listed, if not available from the publishers, may be consulted in various libraries.

The Forest Products Laboratory reserves the right to furnish only those publications which in its judgment will give the information requested. Blanket requests or requests for a large number of copies of any individual article will not be filled except in unusual cases.

LIST OF PUBLICATIONS ON PULP AND PAPER -- SECTION I

PULPWOOD

Journal Articles

- Relation of wood properties to pulp yield and quality, by G. H. Chidester, Pulpwood Annual pp. 50-52 (1954) American Pulpwood Assoc., N. Y., N. Y.
- Anatomy of common North American pulpwood barks, by Ying-Pe Chang, TAPPI Monograph Series No. 14 (1954).
- Deterioration losses in stored southern pine pulpwood, by R. M. Lindgren. Tappi, June 1953.
- *Portable barking equipment, by E. W. Fobes. Forest Products Research Society Proceedings, 1952.
- Deterioration of southern pine pulpwood during storage, by R. M. Lindgren, Div. of Forest Pathology, So. For. Exp. Sta., New Orleans 12, La., Forest Products Research Society Proceedings, 1951.
- *Effect of storage of slash pine pulpwood on sulfate and groundwood pulp quality, by J. N. McGovern, J. S. Martin, and A. Hyttinen. Forest Products Research Society Proceedings, 1951.
- Jack pine pulpwood deterioration in yard storage, by T. A. Pascoe and T. C. Scheffer. Paper Mill News 74 (12): 58, 60, 62, 64, 66, 68, Mar. 24, 1951; Paper Trade Jour., July 13, 1950.
- *Status of portable wood chippers, by E. W. Fobes. Forest Products Research Society Proceedings, 1949.
- *Influence of volume of summerwood and rate of growth on the specific gravity of southern pine pulpwood, by E. R. Schafer. South. Pulp & Paper Mfr., Oct. 31, 1949.
- Microstructure of wood and wood fibers, by G. J. Ritter, Tappi, Jan. 1949.
- Use and adaptation of power saws for pulpwood harvesting, by J. Harry Rich. South. Lbrman., Dec. 15, 1944.
- Measuring green southern yellow pine pulpwood by weight or by cord, by R. H. Miller. Paper Trade Jour., July 17, 1941; South. Pulp & Paper Jour., June 1941.
- *A simple device for detecting compression wood. Jour. Forestry, Apr. 1941; also FPL Rept. 1390, 1953.

Journal Articles (continued)

Discoloration of swamp black gum pulpwood in storage, by E. R. Schafer, J. C. Pew, and M. Y. Pillow. TAPPI Papers 22, 1939.

Production of loblolly pine pulpwood in the mid-Atlantic region, by J. B. Cuno. South. Pulp & Paper Jour., Pt. 1, Mar. 1939; Pt. 2, May 1939.

Method of integrating concentric ring areas, by E. R. Schafer, and J. C. Pew. (Applicable to the measurement of springwood.) Instruments, May 1939.

Forest Products Laboratory springwood-summerwood measuring instruments, by J. C. Pew and E. R. Schafer. South. Pulp & Paper Jour., Jan. 1939.

Relation of growth characteristics of southern pine to its use in pulping, by C. E. Curran. Paper Trade Jour., June 9, 1938.

Some relations between growth conditions, wood structure, and pulping qualities (of southern pine), by C. E. Curran. Paper Trade Jour., Sept. 10, 1936.

Decay in pulpwood, by C. A. Richards. Paper Mill & Wood Pulp News, Oct. 12, 1929.

Processed Reports

- *P&I-60 Partial list of references on the chemical debarking of trees.
Nov. 1955.
- *PP-88 Physical characteristics of ponderosa pine pulpwood from Black
Hills, South Dakota, by E. R. Schafer and A. Hyttinen. Jan.
1955.
- *PP-107 Summary of certain physical properties of domestic hardwoods and
foreign woods used in pulping experiments at the Forest Products
Laboratory July 1927 to December 1940.
- *PP-108 Summary of certain physical properties of softwoods (except pines)
used in pulping experiments at the Forest Products Laboratory --
July 1927 to July 1935.
- *PP-109 Summary of certain physical properties of domestic and foreign
pine woods used in pulping experiments at the Forest Products
Laboratory -- July 1927 to July 1935.
- *PP-110 Physical characteristics and chemical analysis of certain domestic
hardwoods received at the Forest Products Laboratory for pulping
from October 1, 1948 to November 1947.

PULPWOOD (continued)

Processed Reports (continued)

- *PP-111 Physical characteristics and chemical analysis of foreign pine woods received at the Forest Products Laboratory for pulping from October 1, 1948 to June 15, 1957.
- *PP-112 Physical characteristics and chemical analysis of certain domestic pine woods received at the Forest Products Laboratory for pulping from October 1, 1948 to September 4, 1956.
- *PP-113 Fiber length, specific gravity, and chemical analysis of certain foreign hardwood pulpwoods received at the Forest Products Laboratory from October 1, 1948 to December 31, 1957.
- *PP-114 Physical characteristics and chemical analysis of certain softwoods (other than pine) received at the Forest Products Laboratory from October 1, 1948 to August 7, 1957.
- *1417 Procedure for determining the properties and characteristics of pulpwood. Revised Aug. 1955.
- *R1637-18 Mobile pulpwood harvesters, by E. W. Fobes. Oct. 1947.
- *R1637-21 Log measuring instrument, by E. W. Fobes. Oct. 1947.
- *1730 Bark-peeling machines and methods, by E. W. Fobes. Revised Feb. 1957.
- *1993 Greater pulp yields per acre per year, by H. L. Mitchell. July 1954.
- *2038 Debarkers used in the South and East, by R. H. P. Miller. Sept. 1955.
- *2071 Developments in debarking, by E. W. Fobes. Dec. 1956.

Miscellaneous

- *Summary of chemical and color properties of various woods used in pulping experiments at the Forest Products Laboratory, July 1927 to July 1935. M27582F.
- *Physical and chemical properties of various pulping hardwoods and softwoods received at Forest Products Laboratory from July 1935 to October 1, 1948. M85183, -4, -5F.
- *Amount and moisture content of bark on pulpwood received at the Forest Products Laboratory, July 1927 to July 1946. M80571F.

Technical Notes

- *B-14 Methods of determining the specific gravity of wood.
- *189 Differences between heartwood and sapwood.

PULPWOOD (continued)

Technical Notes (continued)

- *218 Weights of various woods grown in the United States.
- *229 Comparative decay resistance of heartwood of different native species when used under conditions that favor decay.

PULP

Bulletins and Circulars

Control of decay in pulp and pulpwood, by Otto Kress, C. J. Humphrey, C. A. Richards, M. W. Bray, and J. A. Staidl. U. S. Dept. Agr. Bull. 1298.

Journal Articles

- Evaluation of the SEMC-TAPPI drainage-time tester, by C. E. Hrubesky. Tappi 37:425-27, Oct. 1954.
- *Comparison of several freeness testers on board stock -- Williams freeness values, by C. E. Hrubesky. Tappi 32(7):315-318, July 1949.
- Comparison of several freeness testers on board stock, by C. E. Hrubesky. TAPPI Papers 31, 1948.
- *Length and width of unbleached sulphate pulp fibers from certain western woods, by Melburn Heinig and F. A. Simmonds. Paper Indus. & Paper World, Aug. 1948.
- Additional data on the recovery of wet pulp mats from compressive deformation, by C. O. Seborg and F. A. Simmonds. Paper Trade Jour., Oct. 9, 1947.
- Measurement of the stiffness in bending of single fibers, by C. O. Seborg and F. A. Simmonds. Paper Trade Jour., Oct. 23, 1941.
- *Screen analysis as an aid in pulp evaluation, by E. R. Schafer and L. A. Carpenter. Paper Trade Jour., May 8, 1930; also FPL Rept. 884, 1956.
- *Cross-sectional dimensions of fibers in relation to paper-making properties of loblolly pine, by J. C. Pew and R. G. Knechtges. Paper Trade Jour., Oct. 12, 1939.
- Properties of wet fiber mats: Relation of recovery from compressive deformation to sheet properties, by C. O. Seborg, F. A. Simmonds, and P. K. Baird. Paper Trade Jour., Aug. 24, 1939; TAPPI Papers, 1939.

Journal Articles (continued)

- Drainage characteristics of pulps and stuffs: I, Effect of acids and other electrolytes on freeness, by S. R. Adams, F. A. Simmonds, and P. K. Baird. TAPPI Papers, 1939; summary in Paper Indus. & Paper World, Apr. 1939.
- Comparison of sheet machines for pulp evaluation by R. H. Doughty and C. E. Curran. Paper Trade Jour., Dec. 21, 1933.
- Effect of different-sized fibers on the physical properties of groundwood pulp, by E. R. Schafer and Matti Santaholma. Paper Trade Jour., Nov. 9, 1933.
- The microstructure of a wood pulp fiber, by G. J. Ritter and G. H. Chidester. Paper Trade Jour., Oct. 25, 1928; Pulp & Paper Mag. Canada, Nov. 15, 1928.

CHEMICAL CONSTITUTION OF WOOD AND PULP

Journal Articles

- *Correlation between chlorine number and lignin content of high-yield kraft pulps, by E. L. Keller and P. B. Borlew. Tappi 38(6):379-383, June 1955.
- *Chemical composition of common North American pulpwood barks, by Y. Chang and R. L. Mitchell. Tappi 38(5):315-320, May 1955.
- *Photometric determination of the solubility of pulp in sodium hydroxide solutions, by R. M. Kingsbury. Tappi 37(8):353-355, Aug. 1954.
- *Techniques for the determination of pulp constituents by quantitative paper chromatography, by J. F. Saeman, etc. Tappi 37(8):336-343, Aug. 1954.
- *Determination of copper in wood pulps with tetraethylenepentamine, by R. M. Kingsbury and C. L. Lake. Tappi 35(11):527-528, Nov. 1952.
- *Determination of iron in wood and wood pulp, by R. M. Kingsbury. Tappi 34(8):382-384, Aug. 1951.
- Douglas-fir heartwood flavanone: Its properties and influence on sulfite pulping, by J. C. Pew. Tappi, 32, Jan. 1949.
- Same: *A flavanone from Douglas-fir heartwood. FPL Rept. 1692, 1956.
- Chemical properties of screen fractions of black gum and slash pine groundwood pulps, by E. R. Schafer and Matti Santaholma. Paper Trade Jour., Nov. 9, 1933.
- Decay of wood in groundwood pulp: Relation of loss in weight to chemical properties, by M. W. Bray. Paper Trade Jour., June 5, 1924.

PAPER AND PAPERBOARD

Paper

Journal Articles

Method for evaluating the surface roughness of paper, by M. Heinig and P. K. Baird. Paper Trade Jour., Oct. 9, 1941; Paper Indus. & Paper World, Nov. 1941.

Suitable papers and wrappings for meat in cold storage lockers, by M. Heinig. Proc. 1st Cold Storage Lockers Operators Conf., May 2-3, 1939; Paper & Twine Jour., Dec. 1939.

Sorption of water vapor by paper-making materials: (See Section II for Parts 1 and 3)

Part 2. Effect of physical and chemical processing, by C. O. Seborg, F. A. Simmonds, and P. K. Baird. Indus. & Eng. Chem., Nov. 1936.

Part 4. Irreversible loss of hygroscopicity due to drying, by C. O. Seborg, F. A. Simmonds, and P. K. Baird. Paper Trade Jour., Nov. 10, 1938.

Capillary rise of water in fibrous sheets and possible applications, by F. A. Simmonds. Paper Trade Jour., Sept. 7, 1933.

Relation of sheet properties and fiber properties in paper:

Part 1. A qualitative study of the tensile strength-solid fraction relation, by R. H. Doughty. Paper Trade Jour., July 9, 1931.

Part 2. The variation of ultimate tensile strength with basis weight and related factors, by R. H. Doughty. Paper Trade Jour., Oct. 8, 1931.

Part 3. The effect of fiber length on sheet properties: Preliminary experiments, by R. H. Doughty. Paper Trade Jour., Mar. 3, 1932.

Part 4. The use of structural concepts in pulp evaluation and paper design, by R. H. Doughty. Paper Trade Jour., Sept. 8, 1932.

Processed Reports

*R1739 Utilization of farm woodlot woods for roofing felt, by E. A. Anderson and C. E. Hrubesky. Jan. 1955.

*1750 Effect of phenolic resins on physical properties of kraft paper, by P. K. Baird, R. J. Seidl, and D. J. Fahey. Mar. 1956.

*2066 Method for determining tensile properties of paper by V. C. Setterholm and E. W. Kuenzi. Dec. 1956.

PAPER AND PAPERBOARD (continued)

Paper (continued)

Processed Reports (continued)

- *2130 Apparatus for determination of surface profile, by V. C. Setterholm and W. L. James. Sept. 1958.

Paperboard

Journal Articles

- *Linerboards from jack pine and hardwood semichemical pulps, by J. N. McGovern, G. E. Mackin, and G. H. Chidester. Fibre Containers, Oct. 1948; Tappi, Apr. 1949.
- *Effect of relative humidity on the moisture content and bursting strength of four container boards, by C. O. Seborg, R. H. Doughty, and P. K. Baird. Paper Trade Jour., Oct. 12, 1933.

Processed Reports

- *PP-115 Milk carton boards from Michigan softwood and hardwood species, by D. J. Fahey, R. M. Kingsbury, E. L. Keller, and J. S. Martin. Mar. 1957.

Technical Notes

- *150 Direction of fibers affects strength of fiber boxes.

STRUCTURAL FIBERBOARD AND HARDBOARD

Bulletins and Circulars

- *Building Fiberboards. Separate from USDA Handbook No. 72, 1955.

Journal Articles

- *Testing and evaluating procedures for building boards, by Wayne C. Lewis. Forest Products Jour. 6(7):241-246, July 1956.
- Paper and fiber products in construction, by R. J. Seidl. Small Homes Council Bulletin, University of Illinois, Urbana, Ill., 1954.
- *Effect of particle size and shape on strength and dimensional stability of resin-bonded wood-particle panels, by H. Dale Turner. Preprint For. Prod. Res. Soc. 8th Annual Natl. Meeting, Grand Rapids, Mich., May 1954.

STRUCTURAL FIBERBOARD AND HARDBOARD (continued)

Journal Articles (continued)

- *Application of refining energy index concept to experimental evaluation of strength-yield relations for hardboard stocks, by H. Dale Turner. Tappi 36(12), Dec. 1953.
- *Evaluation of refiner-plate designs used for experimental processing of hardboard stocks, by H. Dale Turner. Tappi 36(11):513-17, Nov. 1953.
- *Preparation of hardboard from white oak, by S. L. Schwartz. Tappi 36(10):445-51, Oct. 1953.
- The hardboard industry in the United States, by W. C. Lewis. For. Prod. Res. Soc. Jour. 2(4):3-6, 68, Nov. 1952.
- Features of hardboard industry in Scandinavia and their application to United States development, by H. Dale Turner. For. Prod. Res. Soc. Jour 2(3):62-64, Sept. 1952.
- *Suitability of sand hickory for insulating board and hardboard, by S. L. Schwartz and P. K. Baird. South. Pulp and Paper Mfr. 15(4):68-74, Apr. 10, 1952.
- Effect of molding temperature on the strength and dimensional stability of hardboards from fiberized water-soaked Douglas-fir chips, by S. L. Schwartz and P. K. Baird. Forest Products Research Society preprint, June 1950.
- *Effect of some manufacturing variables on the properties of fiberboard prepared from milled Douglas-fir, by H. Dale Turner, J. P. Hohf, and S. L. Schwartz. Forest Products Research Society preprint, 1948.
- Experiments on the production of insulating board and hardboard from western sawmill and logging waste, by S. L. Schwartz, J. C. Pew, and E. R. Schafer. Paper Trade Jour., Oct. 2, 1947; Paper Indus. & Paper World, Sept. 1947.
- Insulating board from Douglas-fir and alder, by S. L. Schwartz. Paper Industry 32(9):974-976, Dec. 1950.

Processed Reports

- *1786 Relation of several formation variables to properties of phenolic resin-bonded wood-waste hardboards, by H. Dale Turner and John K. Kern. Mar. 1956.
- *1931 Insulating board and hardboard from four common hardwoods of north-eastern farm woodlots, by S. L. Schwartz. Sept. 1952, 1958.
- *2123 Hardboard from lodgepole pine, Engelmann spruce and Douglas-fir, by S. L. Schwartz. June 1958.

STRUCTURAL FIBERBOARD AND HARDBOARD (continued)

Processed Reports (continued)

- *2125 Hardboard from red alder and from a mixture of slow-growth southern oaks, by S. L. Schwartz. June 1958.

PLASTICS AND MOLDED PULP PRODUCTS

Bulletins and Circulars

- *Modified woods and paper-base laminates. Separate from USDA Wood Handbook No. 72. 1955.

- *Structural sandwich construction. Separate from USDA Wood Handbook No. 72. 1955.

H&HFA Tech. Papers. FPL in cooperation with the Housing and Home Finance Agency. Copies available from Housing & Home Finance, Washington 25, D. C.

No. 7. Physical properties and fabrication details of experimental honeycomb-core and sandwich house panels. 1948.

No. 9. Some properties of paper-overlaid veneer and plywood. 1948.

Journal Articles

- *Overlays promise better utilization of timber, by R. J. Seidl. Proc. Society of American Foresters meeting, Portland, Oreg., 1955.

- *Paper-overlaid planks provide smooth, durable stadium seats, by B. G. Heebink. South. Lbrmn. 191(2393):125-26, Dec. 15, 1955.

- *Some potentialities of overlaid lumber, by B. G. Heebink, R. J. Seidl, D. F. Laughnan, and R. F. Blomquist. For. Prod. Jour., pp. 97-101, Apr. 1955.

- *Dimensional stabilizing effect of paper overlays when applied to lumber, by B. G. Heebink. Jour. of For. Prod. Res. Soc., pp. 149-151, June 1954.

- *Thermal conductivity of paper honeycomb cores and sound absorption of sandwich panels, by D. J. Fahey, M. E. Dunlap, and R. J. Seidl. South. Pulp & Paper Mfr., Sept. 10, 1953; also FPL Rept. R1952, 1953.

Sandwich panels for home building. South. Lbrman., Jan. 1, 1948.

- *Paper and plastic overlays for veneer and plywood, by R. J. Seidl. Natl. Hardwood Mag., Dec. 1947; For. Prod. Res. Soc. Jour. 1947, reissued 1952.

New goods from wood, by A. J. Stamm and G. H. Chidester. Yearbook (USDA) Separate No. 1973 (discusses in part pulp and paper plastics).

PLASTICS AND MOLDED PULP PRODUCTS (continued)

Journal Articles (continued)

Pulp-reinforced-plastics, by S. L. Schwartz, J. C. Pew, and H. R. Meyer. South. Pulp & Paper Jour., Aug. 15, 1945; Paper Mill News, July 21, 1945 and Aug. 4, 1945.

*Pulps for pulp-reinforced plastics, by S. L. Schwartz, J. C. Pew, and H. R. Meyer. Paper Trade Jour., July 12, 1945; South. Pulp & Paper Jour., Aug. 1945; Pulp & Paper Mag. of Canada, Sept. 1945; Paper Indus. & Paper World, Sept. 1945.

Paper-base laminates offer high strength, by E. C. O. Erickson and G. E. Mackin. Plastics, Feb. 1945; Amer. Soc. Mech. Eng. Trans., May 1945.

Potentialities of paper-base laminates as compared with other laminates, by A. J. Stamm. Paper Trade Jour., May 25, 1944.

Processed Reports

- *1319 Strength and related properties of Forest Products Laboratory laminated paper plastic (papreg) at normal temperature, by E. C. O. Erickson and K. H. Boller. Jan. 1954.
- *1348 The gluing of laminated paper plastic (papreg), by H. W. Eickner. July 1955.
- *1385 The electrical resistivity of resin-treated wood (impreg and com-preg), hydrolyzed-wood sheet (hydroxylin), and laminated resin-treated paper (papreg), by R. C. Weatherwax and A. J. Stamm. Mar. 1956.
- *1483 Low-resin-content and resin-free pulp plastics, by S. L. Schwartz, J. C. Pew, and H. R. Meyer. Inf. Rev. & Reaf. Aug. 1953.
- *1521 Some strength properties of papreg at elevated and subnormal temperatures, by H. R. Meyer and E. C. O. Erickson. Mar. 1956.
- *1521-B Effect of moisture on certain strength properties of papreg, by H. R. Meyer and E. C. O. Erickson. Mar. 1956.
- *1521-C Effect of repeated cycles of freezing and thawing on certain strength properties of papreg, by H. R. Meyer and E. C. O. Erickson. Mar. 1956.
- *1538 Durability of papreg-to-papreg and papreg-to-birch glue joints, by H. W. Eickner. Mar. 1956.
- *1577 Preparation of lignin-filled paper for laminated plastics. Mar. 1956, revised Sept. 1957.

PLASTICS AND MOLDED PULP PRODUCTS (continued)

Processed Reports (continued)

- *1579 Physical and mechanical properties of lignin-filled laminated paper plastics. Mar. 1956.
- *1623 Resin-treated pulpboard core material for sandwich constructions, by G. E. Mackin, R. M. Kingsbury, P. K. Baird, and E. C. O. Erickson. Mar. 1956.
- *1796 Paper honeycomb cores for structural building panels: Effect of resins, adhesives, fungicide, and weight of paper on strength and resistance to decay, by R. J. Seidl, E. W. Kuenzi, D. J. Fahey, and C. S. Moses. Apr. 1956.
- *1918 Paper-honeycomb cores for structural sandwich panels, by R. J. Seidl. July 1956.
- *1964 Nonplastic molded pulp products. 1953.
- *1965 Papier mache. 1953.
- *2121 Sandwich panels for building construction, by L. W. Wood. Oct. 1958.

PULPING PROCESSES

Sulfite

Journal Articles

*Some experiments in sodium sulphite pulping, by J. N. McGovern and E. L. Keller. Pulp & Paper Mag. of Canada, Aug. 1948; also FPL Rept. R1728, 1956.

Sulfite pulp production: Some factors pertinent to meeting war-born shortages, by J. N. McGovern and G. H. McGregor. Paper Trade Jour., Dec. 30, 1943; Pac. Pulp & Paper Indus., Oct. 1943; Paper Indus. & Paper World, Dec. 1943.

*A kinetical theory of the sulfite cooking reaction, by G. Goldfinger. Paper Trade Jour., Oct. 9, 1941.

Wetting agents in sulfite pulping: The effect of certain wetting agents on the sulfite penetration and pulping of various woods, by J. N. McGovern and G. H. Chidester. Paper Trade Jour., Dec. 12, 1940.

PULPING PROCESSES (continued)

Sulfite (continued)

Effect of acid concentration and temperature schedule in pulping resinous woods, by G. H. Chidester and J. N. McGovern. Paper Trade Jour., Mar. 7, 1940; South. Pulp & Paper Jour., June 1940.

Comparison of calcium with sodium base liquors in sulfite pulping, by J. N. McGovern and G. H. Chidester. Amer. Pulp Supts. Assn. Yearbook & Program 1939, 274-78.

Rate of temperature rise in sulfite pulping of Western hemlock, by J. N. McGovern and G. H. Chidester. Paper Trade Jour., Sept. 29, 1938.

*Effect of varying the concentration of combined sulfur dioxide in soda base sulfite pulping, by G. H. Chidester and P. S. Billington. Paper Trade Jour., Feb. 11, 1937; Pulp & Paper Mag. of Canada, Feb. 1937.

Effect of high sulfur dioxide concentration and high pressures in sulfite pulping, by J. N. McGovern. Paper Trade Jour., Nov. 12, 1936.

A method for converting sodium sulfide to sodium carbonate in the recovery of soda base sulfite pulping liquor, by P. S. Billington, G. H. Chidester, and C. E. Curran. Paper Trade Jour., Sept. 12, 1935.

Effect of chip length in sulfite pulping, by J. N. McGovern and G. H. Chidester. Paper Trade Jour., May 3, 1934.

Effect of relatively high sulfur dioxide concentration in sulfite pulping, by G. H. Chidester and J. N. McGovern. Paper Trade Jour., Feb. 4, 1932.

*Reuse of relief and waste liquors in sulfite cooking acid, by G. H. Chidester, C. E. Hrubesky, and J. N. McGovern. Paper Trade Jour., Nov. 19, 1931.

Use of decayed wood in bleached sulfite pulp, by J. D. Rue, R. N. Miller, and C. J. Humphrey. Paper Trade Jour., Feb. 26, 1925.

Decayed wood for sulfite pulp, by J. D. Rue, R. N. Miller, and C. J. Humphrey. Paper Trade Jour., Jan. 24, 1924; Pulp & Paper Mag. of Canada, Jan. 24, 1924.

Alkaline

Journal Articles

*Effect of bark in the sulphate pulping of a northern oak mixture, by K. J. Brown. Tappi 39(6):443-448, June 1956.

PULPING PROCESSES (continued)

Alkaline (continued)

Journal Articles (continued)

*Effect of bark on yield and quality of sulfate pulp from southern pine, by J. S. Martin and K. J. Brown. Tappi 35(1):7-10, Jan. 1952.

*Influence of sodium sulfite and sodium thiosulfate in the sulfate pulping of Engelmann spruce, by M. W. Bray and Bernard Singer. Paper Indus. & Paper World, May 1947; Paper Trade Jour., Aug. 1947.

*Effect of continuous liquor flow in pulping by the sulphate process, by S. L. Schwartz and M. W. Bray. Paper Trade Jour., Oct. 24, 1946; also FPL Rept. 1403, Mar. 1956.

Effect of chemical-wood ratio in pulping Douglas-fir by the sulfate process, by J. S. Martin and M. W. Bray. Paper Trade Jour., Sept. 16, 1943.

Recovery of fats, waxes, resins, and turpentine from wood, by M. W. Bray. Paper Trade Jour., Sept. 3, 1942.

*Sulfidity effect in the sulfate pulping of Douglas-fir, by M. W. Bray, J. S. Martin, and S. L. Schwartz. Paper Trade Jour., Oct. 26, 1939; TAPPI Papers, 1939.

Chemistry of the alkaline wood pulp processes: (See Section II for Parts 1, 2, and 3.)

Part 4. Is there a critical pulping temperature for the sulfate process?, by J. S. Martin, M. W. Bray, and C. E. Curran. Paper Trade Jour., Nov. 16, 1933.

Part 5. Effect of chemical ratio at constant initial concentration and the effect of initial concentration on the rate of delignification and hydrolysis of Douglas-fir by the sulfate process, by S. L. Schwartz and M. W. Bray. Paper Trade Jour., Sept. 22, 1938; summary in Paper Indus. & Paper World, Sept. 1938.

Properties and sulfate pulping characteristics of compression wood, by M. Y. Pillow and M. W. Bray. Paper Trade Jour., Dec. 26, 1935.

Reaction variables of the alkaline pulping process, by C. E. Curran and M. W. Bray. Indus. & Eng. Chem., Aug. 1930.

Processed Reports

*1416 The viscosity-temperature-total solids relationship of sulfate black liquors, by S. L. Schwartz. 1956.

PULPING PROCESSES (continued)

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General (continued)

Technical Notes

- *191 Density, fiber length, and yields of pulp for various species of wood.
- *212 American woods for papermaking.

PULP PROCESSING AND PAPERMAKING

Bleaching

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- *Bleaching semichemical pulp, by F. A. Simmonds and R. M. Kingsbury. TAPPI Monog. No. 10, pp. 179-96, 1953.
- *Observations on bleaching groundwood pulps, by R. M. Kingsbury, E. S. Lewis, and F. A. Simmonds. Paper Trade Jour., June 10, 1948.
- Extraction treatments in bleaching aspen neutral sulphite semichemical pulp, by S. A. Trivedi, R. M. Kingsbury, and F. A. Simmonds. The Paper Indus. & Paper World, Jan. 1948.
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- Bleaching aspen neutral sulfite semichemical pulp with sodium peroxide, by R. M. Kingsbury, F. A. Simmonds, R. T. Mills, and F. L. Fennell. Paper Trade Jour., Sept. 12, 1946.
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- *1666-7 Wood residues in compression molded and extruded products, by Paul Bois. Mar. 1955.
- *1666-9 Wood flour, by L. H. Reineke. May 1956.
- *1666-21 Board materials from wood waste. Apr. 1954.

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Pulpwood storage problems, by R. M. Lindgren.

Recent observations on the bleaching of hardwood semichemical pulps, by R. M. Kingsbury.

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- Manufacture of sulphite pulp in Western Germany, by J. N. McGovern and G. K. Dickerman. Pulp & Paper Mag. of Canada, May 1946.
- *Manufacture of pulp and paper and related products from wood in Western Germany, by J. N. McGovern and G. K. Dickerman. Paper Trade Jour., Jan. 9, 16, 1945; also FIAT Rept. No. 487.

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- *399 Some books about wood (a list). Oct. 1955.
- *564 Partial list of reference works on pulp and paper. 1954.
- *1499 Facilities for pulp and paper research at the U. S. Forest Products Laboratory, by G. H. Chidester. Aug. 1951.
- *1698 The U. S. Forest Products Laboratory, by F. J. Champion. Mar. 1956.
- *1972 Wood -- A simple explanation, what it is, and how we use it, by F. J. Champion. Jan. 1954.

Technical Notes

- *240 A hundred definitions pertaining to wood and other forest products.

LIST OF PUBLICATIONS ON PULP AND PAPER -- SECTION II

(Publications listed in this section are designated (a) if of limited interest, (b) superseded by later material, and (c) if of historical value.)

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- Morphology of cellulose fibers as related to the manufacture of paper, by G. J. Ritter. Paper Trade Jour., Oct. 31, 1935. (b)

Journal Articles (continued)

Application of elementary statistical methods in the testing of pulp and paper, by F. A. Simmonds and R. H. Doughty. Paper Trade Jour., Dec. 21, 1933. (c)

Proposed methods for the dirt count of pulp and paper, by F. A. Simmonds, P. S. Billington, and P. K. Baird. Paper Trade Jour., July 27, 1933. (c)

Further studies on ground wood evaluation, by E. R. Schafer and M. Heinig. Paper Trade Jour., Sept. 3, 1931. (c)

Ground wood pulp evaluation: By means of static bending, screen analysis, and rate of flow tests, by E. R. Schafer and L. A. Carpenter. Paper Trade Jour., July 17, 1930. (c)

Rate of flow test for evaluating ground wood pulp, by L. A. Carpenter and E. R. Schafer. Paper Trade Jour., July 1930; TAPPI Papers, May 1930. (c)

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Methods used at the Forest Products Laboratory for the chemical analysis of pulps and pulpwoods, by M. W. Bray. Paper Trade Jour., Dec. 20, 1928. (a)

Chemical analysis of the fractions obtained by screening blackgum and slash pine groundwood pulp, by M. Santaholma and E. R. Schafer. Paper Trade Jour., Nov. 9, 1933. (a, c)

A comparison of four methods for the determination of lignin, by P. S. Billington, F. A. Simmonds, and P. K. Baird. Paper Trade Jour., Jan. 26, 1933. (b, c)

Determination of cellulose and amount of chlorine consumed in its isolation: A short method, by M. W. Bray. Indus. & Eng. Chem., Jan. 15, 1929. (b, c)

Chemistry of the cellulose determination, by C. E. Peterson and M. W. Bray. Indus. & Eng. Chem., Nov. 1928. (b, c)

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Comparison of wood cellulose and cotton cellulose, by S. A. Mahood and D. E. Cable. Indus. & Eng. Chem., Aug. 1922. (c)

Chemical constitution of soda and sulfate pulps from coniferous woods and their bleaching qualities, by S. D. Wells. Indus. & Eng. Chem., Oct. 1921. (c)

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Significant sheet properties for developing specifications for various papers and paperboards, by P. K. Baird. Paper Trade Jour., Jan. 11, 1934.

Sorption of water vapor by paper-making materials:

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Part 3. Hysteresis in the sorption of water vapor by paper-making materials, by C. O. Seborg. Indus. & Eng. Chem., Feb. 1937. (a)

Forest Products Laboratory research on paper machine variables, by W. A. Chilson and P. K. Baird. Paper Trade Jour., Oct. 5, 1933; Pulp & Paper Mag. of Canada, Nov. 1933. (a)

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Part 2. Determination of the solid fraction of simple papers, by P. S. Billington and C. E. Hrubesky. Paper Trade Jour., Aug. 13, 1931.

Part 3. Fiber substance density of pulps and papers, by P. S. Billington and E. L. Keller. Paper Trade Jour., Aug. 13, 1931.

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Part 5. Composition of the air fraction: The effect of solid fraction and thickness of the porosity of air transmissibility of simple papers, by C. O. Seborg, R. H. Doughty, and P. K. Baird. Paper Trade Jour., Sept. 29, 1932.

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Effect of varying humidities on strength of fiberboard and its component plies, by Otto Kress and G. C. McNaughton. Paper, May 22, 1918. (c)

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Sulfite

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A mill scale demonstration of temperature control in sulfite pulping, by G. H. Chidester. Paper Trade Jour., Oct. 11, 1928. (c)

Temperature schedule in sulfite pulping, by W. H. Swanson. Paper Trade Jour., Nov. 25, 1926. (c)

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Sulfite (continued)

Journal Articles (continued)

Chemistry of the sulfite process: (a)

- Part 1. By R. N. Miller and W. H. Swanson. Paper Trade Jour., Apr. 13, 1922.
- Part 2. Chemical properties of pulps prepared by indirect cooking, by M. W. Bray and T. M. Andrews. Paper Trade Jour., Jan. 18, 1932.
- Part 3. Reactions of the calcium base, by R. N. Miller and W. H. Swanson. Paper Trade Jour., Apr. 13, 1923.
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- Part 9. The influence of hydrogen-ion concentration, by R. N. Miller, W. H. Swanson, and Ragnar Soderquist. Paper Trade Jour., Mar. 4, 1926.
- Part 10. Easy-bleaching pulp, by W. H. Swanson and W. H. Monsson. Paper Trade Jour., Mar. 4, 1926.
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Distribution of methoxyl in the products of cooking jack pine by the soda process, by S. S. Aiyar. Indus. & Eng. Chem., July 1923. (c)

Influence of sulfur in the cooking of jack pine by the sulfate process, by S. D. Wells. Pulp & Paper Mag. of Canada, June 21, 1923. (c)

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- Pulping eastern hemlock by the sulfite process: (a)
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Plant Materials (continued)

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Part 5. Production of pulp by the chlorine process, by E. R. Schafer and C. E. Peterson. Paper Trade Jour., Oct. 18, 1928.

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Bleaching

Journal Articles

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Part 4. Effect of consistence on bleaching of sulfite pulp (low density study), by C. E. Curran and P. K. Baird. Paper Trade Jour., Apr. 16, 1925.

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Journal Articles (continued)

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Some observations on the retention of china clay by paper pulp, by Otto Kress and George McNaughton. Paper Trade Jour., Oct. 4, 1917. (c)

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- Use of bark for paper specialties, by Otto Kress. Paper, Oct. 4, 1916;
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- Effect of white water on sheet properties, by E. R. Schafer. Paper Trade
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- Surveying the mill for white water losses to indicate possible savings, by
G. H. Chidester and E. R. Schafer. Paper Trade Jour., Dec. 13, 1928. (c)
- Proposal for reducing the contamination of streams by strawboard mills, by
J. D. Rue and F. G. Rawlings. Paper Trade Jour., Oct. 8, 1925. (c)
- How to measure white water losses, by V. P. Edwardes. Paper Indus., May
1925. (c)
- Recovery of waste paraffined paper by extraction with volatile solvents, by
Otto Kress and L. F. Hawley. Indus. & Eng. Chem., Mar. 1919. (c)
- Broadening the basis of America's pulpwood supply, by C. E. Curran. Jour.
Forestry, Sept. 1938. (c)
- Relation of the work of the U. S. Forest Products Laboratory to the pulp
and paper industry, by C. C. Heritage. Pac. Pulp & Paper Indus.,
Dec. 1928. (c)

OTHER PUBLICATION LISTS ISSUED BY THE
FOREST PRODUCTS LABORATORY

The following lists of publications which deal with other investigative projects of the Forest Products Laboratory are obtainable upon request:

Boxing and Crating -- Strength and serviceability of shipping containers, methods of packing.

Building Construction Subjects -- Partial list of Government publications of interest to architects, builders, retail lumbermen, and engineers.

Chemistry of Wood and Derived Products -- Chemical properties and uses of wood and chemical wood products, such as turpentine, alcohol, and acetic acid.

Fire Protection -- Fire test methods, fire retarding chemicals and treatments and fire behavior of treated and untreated wood, wood products, and wood structures.

Fungus Defects in Forest Products -- Decay stains, and molds in timber, buildings, and various wood products; antiseptic properties of protective materials.

Furniture Manufacturers, Woodworkers and Teachers of Wood Shop Practice -- Partial list of publications for growth, structure, and identification of wood; moisture content, physical properties, air seasoning, and kiln drying; grading, manufacturing, and waste utilization; strength and related properties and joints and fastenings; glues and gluing; veneer and plywood fabrication; box and crate construction and packaging data.

Glue and Plywood -- Development of waterproof glues, preparation and application of various glues, plywood manufacturing problems.

Growth, Structure, and Identification of Wood -- Structure and identification of wood; the effect of cellular structure of wood on its strength, shrinkage, permeability, and other properties; the influence of environmental factors, such as light, soil, moisture, and fire, on the quality of wood produced; and secretions of economic value produced by trees and their exploitation.

OTHER PUBLICATION LISTS ISSUED BY THE
FOREST PRODUCTS LABORATORY (continued)

Logging, Milling, and Utilization of Timber Products -- Methods and practices in the lumber-producing and wood-consuming industries; standard lumber grades, sizes, and nomenclature; production and use of small dimension stock; specifications for small wooden products; uses for little-used species and commercial woods, and low-grade and wood-waste surveys.

Mechanical Properties of Timber -- Strength of timber and factors affecting strength; design of wooden articles or parts where strength or resistance to external forces is of importance.

Seasoning of Wood -- Experimental and applied kiln drying, physical properties, air drying, steam bending.

Structural Sandwich, Plastic Laminates, and Wood-Base Aircraft Components -- Strength, selection, and character of aircraft wood, plywood, and wood and composite laminated and sandwich materials; fabrication and assembly problems; methods of calculating the strength.

Wood Finishing Subjects -- Effect of coatings in preventing moisture absorption; painting characteristics of different woods, and weathering of wood.

Wood Preservation -- Preservative materials and methods of application; durability and service records of treated and untreated wood in various forms.

Note: Since Forest Products Laboratory publications are so varied in subject matter no single big list is issued. Instead a list is made up for each Laboratory division. Twice a year, December 31 and June 30, a list is made up showing new reports for the previous 6 months. This is the only item sent regularly to the Laboratory's mailing list. Anyone who has asked for and received the proper subject lists and who has had his name placed on the mailing list can keep up to date on Forest Products Laboratory publications. Each subject list carries descriptions of all other subject lists.

